User's Manual

# Mask Pattern Editor

YOKOGAWA
Yokogawa Electric Corporation

IM B9852UH-01E
3rd Edition

This user's manual contains useful information about the functions and operating procedures and lists the handling precautions of the Mask Pattern Editor (for the DL9000 Series/SB5000 Series/DLM2000 Series/DL6000/DLM6000 Series). To ensure correct use, please read this manual thoroughly before beginning operation.
After reading the manual, keep it in a convenient location for quick reference whenever a question arises during operation.

## Notes

- The contents of this manual are subject to change without prior notice as a result of continuing improvements to the software's performance and functions. The figures given in this manual may differ from those that actually appear on your screen.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your nearest YOKOGAWA dealer.
- Copying or reproducing all or any part of the contents of this manual without the permission of Yokogawa Electric Corporation is strictly prohibited.
- This software program supports the following DL Series Oscilloscopes.
  DL9000 Series
  SB5000 Series
  DLM2000 Series
  DL6000/DLM6000 Series

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## Revisions

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- 2nd Edition: November 2008
- 3rd Edition: October 2009

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# Notes on Using the Software

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# Overview

This software program is used to create mask patterns that are used on the DL Series. The mask pattern created using this program can be loaded into the DL Series via a PC card or USB memory and used for mask tests, GO/NO-GO judgements, and history search.

## Elements

Elements are valid during the execution of the DL Series mask test.
The DL Series mask test can execute judgements simultaneously on every four elements.
This software program can assign the mask patterns that are created to four elements.
When creating or editing the mask pattern, display ON/OFF and lock/unlock can be set on each element.
In GO/NO-GO judgement and history search, the element settings are ignored, and all of the patterns are loaded.

## Load and Saving Files

The mask patterns that you create can be saved.  You can also load a mask pattern that you created earlier and edit it.

# PC System Requirements

### PC Hardware

- On PCs supporting Microsoft  Windows XP, Xviewer requires a PC with a Pentium III CPU running at 500 MHz or faster, with 256 MB or more of memory  (512 MB or more recommended).
- On PCs supporting Microsoft Windows Vista, Xviewer requires a PC with a Pentium 4 CPU running at 2 GHz or faster, with 1 GB or more of memory.

### Operating System (OS)

Xviewer requires Windows XP, or Windows Vista.

### Display

SVGA or higher (XGA or higher recommended)

### Colors

256 colors or more (65536 colors or more recommended)

### Mouse

A mouse that is compatible with Windows XP, or Windows Vista.

# Installation and Uninstallation

### Installation

1. Download the Mask Editor from YOKOGAWA Website. Download it to an arbitrary location on your PC.
2. The downloaded file is compressed. Use an appropriate decompression software to decompress the file. A folder named MaskEditor is created.

### Start Procedure

1. Double-click MaskEditor.exe. The Mask Editor starts.

### Uninstallation

1. Delete the entire MaskEditor folder.

# Setting the Environment for Creating Mask Patterns

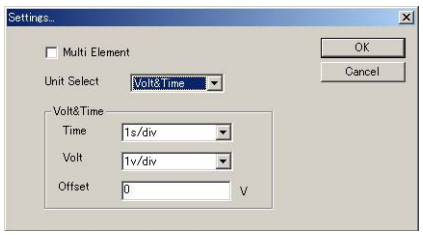
Set the environment for creating mask patterns.
You can enable/disable the multi element function and set the unit of the coordinates used to create the patterns.

1. From the **Edit** menu, choose **Setting**. The Settings dialog box opens.
2. If you are creating mask patterns using elements, select the Multi Element check box.

***Note***

If you select the Multi Element check box, you must select the element for creating the center pattern. For a description of the element setting, see page 10.

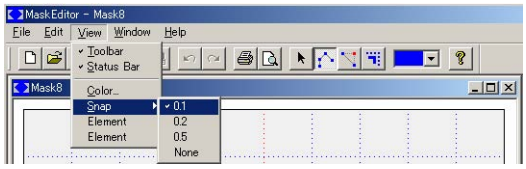
3. Set the unit of the coordinates used to create the mask pattern to Division or Volt&Time. If you select Volt&Time, set the time/division of the time axis, the voltage/division of the voltage axis, and the offset.




4. When you are finished specifying the settings, click OK. To cancel the settings, click Cancel.

### Setting the Snap-to-Grid Function

5. From the View menu, point to Snap. A menu appears for you to select the snap position on the grid.

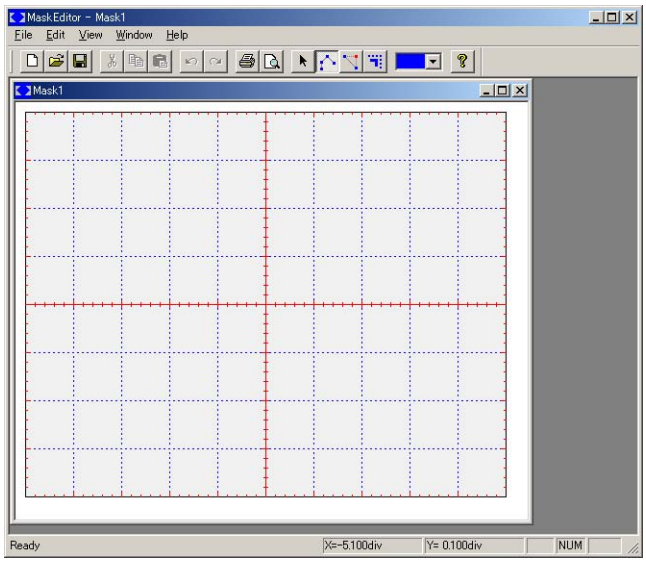



6. Select 0.1, 0.2, 0.5, or None.
   - 0.1: Snap to any of the 10 divisions of the grid
   - 0.2: Snap to any of the 5 divisions of the grid
   - 0.5: Snap to any of the 2 divisions of the grid
   - None: Do not snap to the grid

# Creating Mask Patterns Using the Mouse

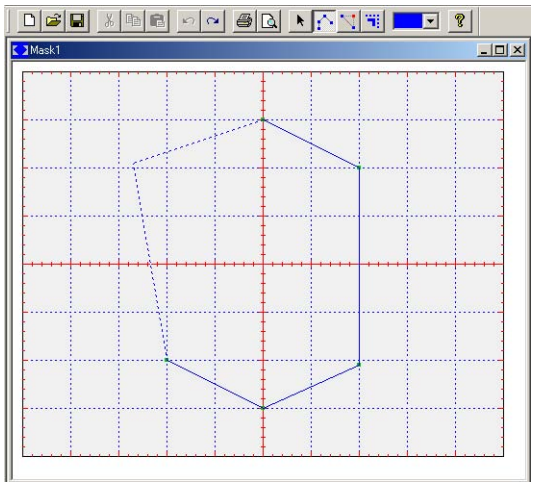
There are two methods for creating mask patterns, using the mouse or entering coordinates numerically. This section explains the method for creating mask patterns using the mouse.
To create mask patterns using elements, you must select the elements for which to create patterns in advance. For a description of the element setting, see page 10.

1. If the window is not open, choose **New** from the **File** menu, or click . A window for creating patterns opens.




2. From the **Edit** menu, choose **Create Polygon**, or click .
3. Click the vertices of the pattern on the coordinates. After you click the last vertex, right-click. The vertices are connected with lines to create the pattern.

   Set three or more vertices.




***Note***

- To delete a pattern that you created, choose Undo from the Edit menu, or click .
- To redo the operation that you undone, choose Redo from the Edit menu, or click .

### Changing the Shape of a Pattern or Moving a Pattern

4. Click on the toolbar.
5. To change the shape of a pattern, drag the vertex or line of the pattern. To move the pattern, select the entire pattern and drag it.

***Note***

When the pointer is , the vertex or line of the pattern can be dragged. When the pointer is , the entire pattern can be moved.

### Adding a Vertex

6. To add a vertex to a pattern that has been created, choose **Segment** from the **Edit** menu, or click .
7. Move the pointer to the position on the pattern line where you wish to add the vertex. Click at the position where the pointer changes to a + cursor. A vertex is added..

### Expanding or Reducing the Pattern

8. To expand or reduce a pattern that has been created, choose **Scale** from the **Edit** menu, or click .
9. Move the pointer near a vertex or line on the pattern. Drag the position where the pointer changes to to expand or reduce the pattern.

### Copying/Pasting a Pattern

10. Click the pattern to be copied, and choose **Copy** from the **Edit** menu or choose **Copy** from the shortcut menu that appears by right-clicking the pattern to be copied.
11. Choose **Paste** from the **Edit** menu, or choose **Paste** from the shortcut menu that appears by right-clicking an arbitrary position on the coordinates.

    The pattern is pasted at the clicked position.

### Deleting a Pattern

12. After clicking the pattern to be deleted, choose **Cut** from the **Edit** menu, or click on the toolbar. The selected pattern is deleted.

## Changing the Pattern Color

***13.*** From the **View** menu, choose **Color** or click . The Color dialog box opens.

***14.*** Select a color and click OK.

If you carry out the operation above when a pattern is selected, the color of the selected pattern changes.

If a pattern is not selected, the color is applied to the next pattern that you create.

## Undoing/Redoing an Operation

To undo a previous operation, carry out any of the following procedures.

- From the Edit menu, choose Undo.
- Choose Undo from the shortcut menu that appears when you right-click.
- Click .

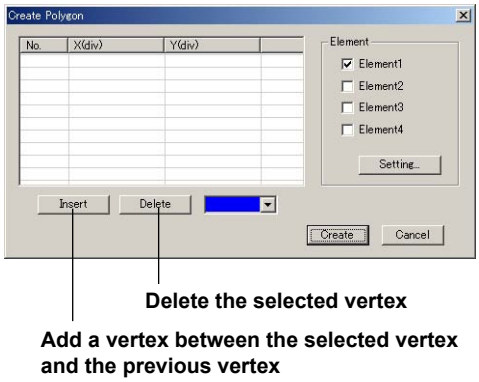
To redo an operation that you undone, carry out any of the following procedures.

- From the Edit menu, choose Redo.
- Choose Redo from the shortcut menu that appears when you right-click.
- Click .

# Creating Mask Patterns by Specifying Coordinates

This section explains the procedure of creating patterns by specifying the vertical and horizontal coordinates, without using the mouse.

1. From the **Edit** menu, choose **Create Polygon by Data**. A Create Polygon dialog box appears.




2. Double-click the vertical or horizontal input area, and enter the coordinate.

   Enter at least three coordinates.

***Note***

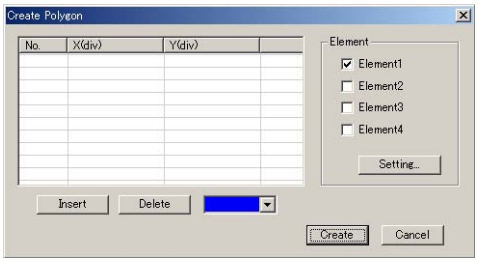
- The vertical and horizontal axes appear differently depending on the unit of coordinates. For details on the unit of coordinates, see page ???.
- The data number is automatically assigned.

3. Click Create. The pattern is created on the coordinates.

   Click Cancel to clear the input data and not create the pattern.

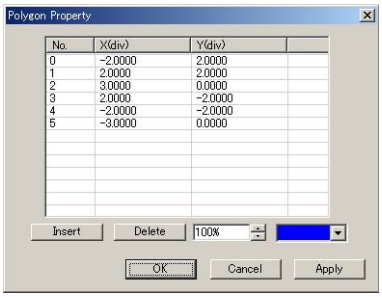
### Using Elements

To create mask patterns by using elements, select the element for which the pattern is to be created in step 2 above. The same pattern can also be assigned to multiple elements.



## Editing an Existing Pattern by Specifying Coordinates

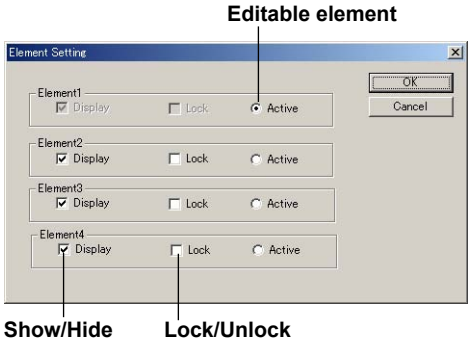
To edit an existing pattern, select the pattern, and choose **Property** from the **Edit** menu or choose **Property** from the shortcut menu that appears by right-clicking the coordinates. The Create Polygon dialog box shown above appears. Edit the pattern using the dialog box.



# Using Elements

A mask pattern can be created for each element and combined to create a mask pattern. This software program allows mask patterns to be created for up to four elements. This section explains the procedures for displaying and locking a pattern that has been created for an element and the procedures for selecting the element to be edited.

***1.*** From the **View** menu, choose **Element**. The Element Setting dialog box opens.




The menu does not appear when the multi element function is enabled. To enable the multi element function, follow the procedures in "Setting the Environment for Creating Mask Patterns" on page 4.

***2.*** As necessary, click the Display (show/hide) and Lock (lock/unlock) option buttons for each element.

If the Display option button is selected, the pattern of the element is displayed.

If the Lock option button is selected, the pattern of the element is locked and cannot be edited.

***3.*** To select the element to be edited, select the Active option button. When you select the Active option button, the Display option button is also selected. The Lock option button is also released.

***4.*** Click OK to apply the specified settings.

# Saving/Loading the Mask Patterns

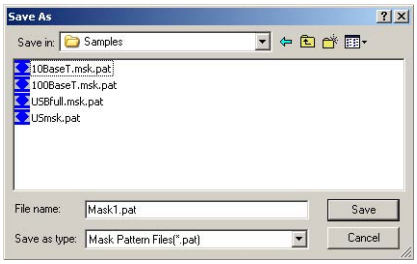
Mask patterns that you create can be saved, and mask patterns that you saved earlier can be loaded.

### Saving (Overwriting) the Mask Pattern

1. From the **File** menu, choose **Save**. The mask pattern is saved (overwritten)..

### Saving the Mask Pattern by Assigning a Name

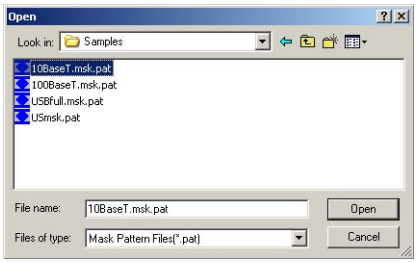
1. From the **File** menu, choose **Save As**, or click on the toolbar. The Save As dialog box opens.




2. Set the file name and destination and click Save.

### Loading a Mask Pattern

1. From the **File** menu, choose **Open**, or click on the toolbar. The Open dialog box opens.

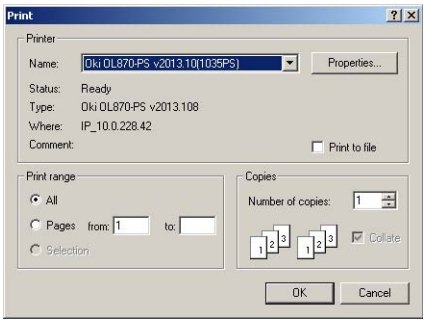



2. Set the directory in which the file is saved and the file name, and click Open. The selected mask pattern is displayed.

# Printing the Mask Pattern

The mask patterns that you create can be printed.

1. From the **File** menu, choose **Print**, or click on the toolbar. The Print dialog box opens.




2. Set the necessary items, and click Print.

### Showing the Preview

1. From the **File** menu, choose **Print Preview**, or click on the toolbar. The print preview is displayed.

### Setting the Printer

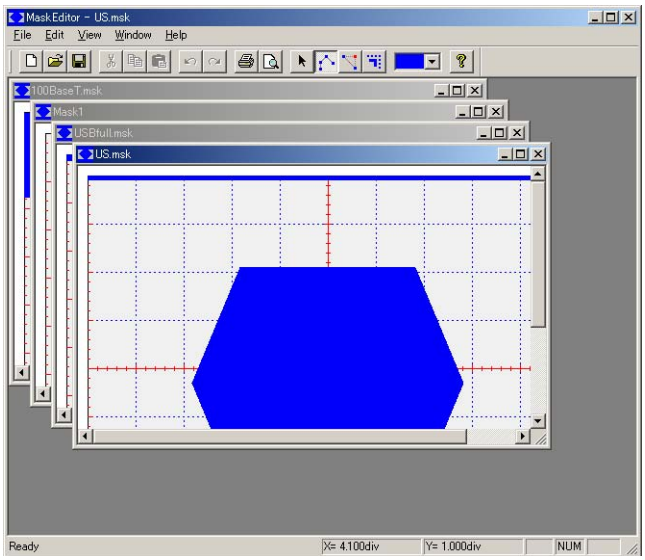
1. From the **File** menu, choose **Print Setup**. The Print Setup dialog box opens.
2. Set the necessary items, and click OK.

# Arranging the Screen

This section explains the procedures for cascading or tiling windows when multiple windows are open.

1. From the **Window** menu, choose **Cascade** or **Tile**.

**Cascade**




**Tile**